

**ABSTRACT**

A surface profile measuring instrument for measuring a surface profile of a workpiece has: a probe having a stylus provided with a measuring portion for measuring a surface of a workpiece at a tip end thereof and a detector for outputting a detection signal which varies depending on a measurement condition between the surface of the workpiece and the measuring portion; a scanning mechanism for relatively moving the measuring portion along the surface of the workpiece; a memory (46) that stores a position information of the contact portion when the detection signal reaches a predetermined reference signal value; a vibration inclination angle calculator (51) that calculates a response variation factor (vibration inclination angle  $\theta$ ) that applies variation to the detection signal from the surface of the workpiece; and a profile processor (53) that corrects the position information to obtain an actual profile of the surface of the workpiece using the response variation factor.